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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-------------------------------------------------------------------------------|-------------|----------------------|---------------------|------------------|
| 10/619,276 | 07/14/2003 | Klaus Topp | 90221 | 6324 |
| 24628 | 7590 | 09/10/2004 | EXAMINER | |
| WELSH & KATZ, LTD 120 S RIVERSIDE PLAZA 22ND FLOOR CHICAGO, IL 60606 | | | AURORA, REENA | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2862 | |

DATE MAILED: 09/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|----------------------------------------------------|--------------------------------------|------------------------------------|--|
| <p align="center">Office Action Summary</p> | Application No. 10/619,276 | Applicant(s) TOPP ET AL. | |
| | Examiner Reena Aurora | Art Unit 2862 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 - 12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1 - 12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>12/29/03</u> . | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Drawings

1. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.121(d)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.
2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the ultrasound , capacitive and optical sensors as claimed in claim 2 and the memory as claimed in claim 3 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate

changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 1-7 are objected to because of the following informalities:
4. As to claims 1 and 7, line 4, it is not clearly defined how is a gap formed where a sample is being introduced for measurement.
5. As to claim 2, line 2, what distance is being measured by a distance-measuring means and also the word "preferably" does not make the claim language definite and should be deleted.
6. As to claim 4, it is not clearly defined what are the coefficients of the function?
7. As to claim 5, what is meant by the phrase "at both sides of the location of the measurement of the conductivity" and also the word "preferably" does not make the claim language definite and should be deleted.
8. As to claims 6 and 12, what position is being measured and what it is being determined with respect to?

9. As to claim 8, what distance is being measured by the distance-measuring operation and also the word "preferably" does not make the claim language definite and should be deleted.
10. As to claim 9, what is a stored function and how is it being determined?
11. As to claim 10, it is not clearly defined how the device is being set-up.
12. As to claim 11, what are the both sides of the location where the position of the sample is being measured and also the word "preferably" does not make the claim language definite and should be deleted.
13. Appropriate correction is required.

*

Claim Rejections - 35 USC § 102

14. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

15. Claims 1, 5, 6, 7, 11 and 12 (in so far as understood) are rejected under 35 U.S.C. 102(b) as being anticipated by Danielson (5,541,510).
16. As to claims 1 and 7, Danielson discloses a device to measure multiple parameters of a conductive target including a means for measuring the conductivity (claim 1, line 3) of a sample (22, fig. 3) according to the eddy current technique (16), wherein the sample is introducible into a gap (d, distance between the sensor and the sample) for measurement and means for measuring the position of the sample in the

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gap for measurement (col. 7, lines 40 - 50), and computing means for determining the sheet resistance on the basis of the measured conductivity and of the position of the sample in the gap for measurement (col. 8, lines 8 - 9).

17. As to claim 7, the method steps of claim 7 can obviously be carried out by the structure of the device stated above. Therefore, the method of claim 7 is rejected on the same grounds as of claim 1.

18. As to claims 5 and 11, Danielson discloses a means for measuring the position of the sample (151, fig. 10) acquiring the position of the sample at least at two locations, preferably adjacent to and in particular at both sides of the location of the measurement of the conductivity, wherein preferably a pair of sensors (152, 154) are arranged at each location (fig. 10).

19. As to claims 6 and 12, Danielson discloses a means for determining the position of at least one of the two surfaces of a sample (fig. 10).

Claim Rejections - 35 USC § 103

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

21. Claims 2 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Danielson (5,541,510) in view of Lehman et al. (6,433,541).

22. As to claims 2 and 8, Danielson discloses a device to measure multiple parameters of a conductive target as explained above. Danielson fails to disclose the distance measuring means can be ultrasound, capacitive or optical. Lehman et al. (hereinafter referred to as Lehman) discloses in-situ metalization monitoring using eddy current measurements for removing a film of a sample wherein both eddy current and optical sensors are used to determine the property of a film (col. 15, lines 23 - 28). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device of Danielson with the teachings of Lehman such that both eddy current or optical sensor can be used to provide a complete range of the properties of the film.

23. Claims 3 – 4 and 9 – 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Danielson (5,541,510) in view of Slates (6,346,807).

24. As to claims 3 - 4 and 9 - 10, Danielson discloses a device to measure multiple parameters of a conductive target as explained above. Danielson fails to disclose a memory in which a function and coefficient of the function are being stored and used in calculation of the sheet resistance relative to the position of the sample in the gap for measurement. Slates discloses an apparatus for determining a gap between a proximity probe and a conductive target material wherein coefficients of function are measured and stored in the memory and then later recalled for use in gap measurement (fig. 10, col. 23, lines 43 – 50 and 22 - 27). Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the device of Danielson with the teachings of Slates such that storing a function in the

memory for calculation of the sheet resistance would result in accurate and faster processing.

Prior Art of Record

25. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
26. Harada (6,657,439) is cited for its disclosure of a sheet resistance meter.
27. Miller et al. (4,000,458) is cited for its disclosure of a method for the non contacting measurement of the electrical conductivity of a lamella.

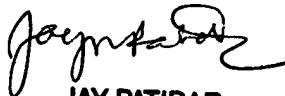
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Reena Aurora whose telephone number is 571-272-2263. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le can be reached on 571-272-2233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Reena Aurora


JAY PATIDAR
PRIMARY EXAMINER